

## REQUEST FOR COUNCIL ACTION

MEETING

DATE: 4/21/03

29-

<b>AGENDA SECTION:</b> Consent	<b>ORIGINATING DEPT:</b> Administration	<b>ITEM NO.</b> D-7
<b>ITEM DESCRIPTION:</b> Professional Services Proposal for Cascade Lake		<b>PREPARED BY:</b> G Neumann

The City needs to retain consultant services for the Cascade Lake project to assist it with the planning for the lake level control structure, the mining of lake, the location and design of the recreational trail, and to ensure the best water quality for the final lake configuration. With the completion of the powerline relocation last summer, the City can proceed to complete the planning and implementation of this long awaited project.

A team of City staff (R Freese-Public Works; D Stotz-Parks; J Harford-Planning; B Huberty-Public Works; M Nigbur-Public Works; R Sutherland-Parks; and, G Neumann-Administration) issued requests for qualification submittals to 15 firms thought to be qualified and interested in performing professional services for the final stage planning and development of the Cascade Lake area. Three firms (URS, Barr Engineering and Bonestroo Anderlik & Rosene) were selected to submit formal proposals. Staff reviewed the comprehensive proposals from the three firms, interviewed the three teams, selected the Bonestroo proposal and negotiated the attached scope of work to be performed by the Bonestroo Anderlik Rosene team.

The costs to complete the Bonestroo scope will be billed on a time and material basis with a not to exceed cost of \$428,670. Current year funding of \$300,000 for the work is included in the 2981 Cascade Lake Capital Improvement Project. The balance needed for completion of the project will be included in 2004 CIP budget requests. The funding source for this work is from the dedicated Flood Control Project reserves (\$332,715) and mining royalties (\$95,955). Most of the consultant work relates to flood control eligible expenses for the lake level control structure, mining which creates additional flood storage, trailways that connect to the flood control railway system etc. However some of the work relates to water quality efforts which does not appear to be a flood control function. Those costs would be paid with mining royalties. No property tax funds are proposed to pay for these consultant costs.

The comprehensive project will assist the City in preparing plans and specifications for the continued mining of City property. At the City's request, the Bauer-Ford Reclamation firm was added to the Bonestroo team. Bonestroo's work will include securing permits for the mining of Cascade Creek, mitigation of disturbed wetlands, EAW preparation and reclamation plans for both shore land and upland areas impacted by creation of the 200 acre lake. Bonestroo will utilize the water quality data collected by others under previous study and use this data plus that collected by Bonestroo to propose final lake bottom, shore land and upland configuration in order to maximize anticipated water quality.

The project schedule will address the immediate (2003 construction season) gravel/sand requirements of the ROC TH 52 project. The project is anticipated to be completed in approximately one year.

### COUNCIL ACTION REQUESTED:

Resolution authorizing the Mayor and City Clerk to execute a professional services contract with Bonestroo Rosene Anderlik and Associates as described above.

**COUNCIL ACTION:** Motion by: \_\_\_\_\_ Second by: \_\_\_\_\_ to: \_\_\_\_\_



Bonestroo, Rosene, Anderlik and Associates, Inc. is an Affirmative Action/Equal Opportunity Employer and Employee Owned

Principals: Otto G. Bonestroo, PE. • Marvin L. Sorvala, PE. • Glenn R. Cook, PE. • Robert G. Schunicht, PE. • Jerry A. Bourdon, PE.

Senior Consultants: Robert W. Rosene, PE. • Joseph C. Anderlik, PE. • Richard E. Turner, PE. • Susan M. Eberlin, C.P.A.

Associate Principals: Keith A. Gordon, PE. • Robert R. Pfefferle, PE. • Richard W. Foster, PE. • David O. Loskota, PE. • Mark A. Hanson, PE. • Michael T. Rautmann, PE. • Ted K. Field, PE. • Kenneth P. Anderson, PE. • Mark R. Rolfs, PE. • David A. Bonestroo, M.B.A. • Sidney P. Williamson, PE., L.S. • Agnes M. Ring, M.B.A. • Allan Rick Schmidt, PE. • Thomas W. Peterson, PE. • James R. Maland, PE. • Miles B. Jensen, PE. • L. Phillip Gravel III, PE. • Daniel J. Edgerton, PE. • Ismael Martinez, PE. • Thomas A. Syfko, PE. • Sheldon J. Johnson • Dale A. Grove, PE. • Thomas A. Roushar, PE. • Robert J. Devery, PE.

Offices: St. Paul, St. Cloud, Rochester and Willmar, MN • Milwaukee, WI • Chicago, IL

Rochester Branch Manager: Richard M. Hefti, PE.

Website: [www.bonestroo.com](http://www.bonestroo.com)

April 16, 2003

Mr. Denny Stotz, Assistant Superintendent  
Rochester Parks and Recreation Department  
201 4<sup>th</sup> Street SE, Room 150  
Rochester, MN 55904-3769

Re: Cascade Lake project consulting Scope of Work

Dear Mr. Stotz:

Enclosed please find enclosed the final scope of work and timeline for Bonestroo's services on the Cascade Lake project. The revised scope of work reflects the changes that we have discussed and agreed to with City staff over the last several weeks. It also reflects the services of Dr. Tony Bauer as a member of our project team to provide guidance on mine operation and reclamation issues.

The costs to complete the scope will be billed on a time and material basis with a not-to-exceed figure of \$428,670. This figure includes approximately \$20,000 for Dr. Bauer's work.

Thanks for the opportunity to work with the City on this very exciting project.

Sincerely,



Rich Brasch  
Project Manager

cc. Ismael Martinez  
Rich Hefti

## **Cascade Lake Project Bonestroo's Scope of Work**

### **1.0 Introduction**

This Scope of Work is broken down by time phase and by discipline. The time phases are as follows:

- Phase 1 – May 2003 through August 2003
- Phase 2 – September 2003 through December 2003
- Phase 3 – January 2004 through April 2004

Within each phase, the major disciplines are listed. For each major discipline, the major tasks that will be completed under the discipline during that phase are listed. The budget for the project is summarized in the last section.

### **2.0 Scope of Work**

#### **2.1 Phase 1 – May 2003 through August 2003**

##### **MINING**

- Collect and review existing information (includes review of CUP's, easements, evaluation of mining operation, etc.)
- Evaluate cross-sections to locate and quantify mineable geologic deposits based on borings
- Prepare Mining and reclamation plan for 2003 mining activity (includes bid documents for competitive bidding)
- Evaluate preliminary lake design/park concept plans for compatibility with mining/reclamation process

##### **AQUATIC ECOLOGY**

- Collect and review existing information
- Complete supplemental bathymetric survey on existing ponds, generate illustrations/maps
- Conduct cursory water quality evaluation of isolated and non-isolated pits
- Set up models to assess lake bathymetry and wind
- Work out preliminary lake design concepts
- Assist in park amenity analysis
- Generate presentation materials for workshop

##### **GROUNDWATER HYDROLOGY**

- Collect and review existing information, define geologic and hydrogeologic conditions within project area from published maps and technical reports

- 32
- Determine location of and coordinate installation of 4-5 monitoring wells
  - Begin monitoring program to determine quality and gradients of groundwater in key locations
  - Produce illustrations showing distribution of geologic materials, prelim. wq data, and implications for groundwater flow and quality

#### **HYDROLOGY AND HYDRAULICS**

- Obtain/review existing data and models
- Obtain additional hydrology and hydraulics data as needed
- Update available models for current conditions (validation)
- Estimate flood storage needs for Cascade Lake system to guide lake concept design
- Determine need for CLOMR/LOMR

#### **WATERSHED POLLUTANT LOAD ASSESSMENT**

- Obtain/review existing data and models (esp MDA data and Barr PONDNET model)
- Update existing model for current conditions and validate start development of future conditions model
- Provide estimates of surface watershed pollutant loading for sensitivity analysis to assess future lake quality

#### **WATER QUALITY ASSESSMENT**

- Review existing data and models
- Assess and select appropriate in-lake response models
- Analyze supplemental water quality data
- Incorporate estimates from others of surface water and groundwater-driven water and nutrient inputs into lake models
- Provide estimates of in-lake water quality based on various lake configurations

#### **WETLAND INVENTORY/MITIGATION/RESTORATION**

- Natural resources and existing conditions inventory
- Historic and existing conditions exhibit and narrative
- Document historic locations of Cascade Creek, changes over time, and reasons for changes
- Complete all wetland delineations for entire site.
- Prepare wetland mitigation plan for Phase 1 mining activity and submit to agency
- Secure agency approval for permits/exemptions for Phase 1 mining activities

#### **UPLAND INVENTORY/MANAGEMENT**

- Evaluate land use/natural resources features, complete NRI
- Assist in park amenity analysis

**IN-LAKE MANAGEMENT**

- Review existing data/information
- Conduct in-lake inventory in both Cascade and a control lake, document findings
- Summarize issues/guidance on current and prospective in-lake biota, habitat, exotics

**REGULATORY COMPLIANCE**

- Review existing information/issues
- Make regulatory agency contact
- Define regulatory compliance issues
- Prepare regulatory compliance strategy

**PARK PLANNING AND LA**

- Review existing information and site conditions
- Prepare project area base map
- Evaluate field data
- Finish preparation of site analysis plan, begin laying out park concepts

**PUBLIC RELATIONS**

- Attend workshop

**PROJECT MANAGEMENT**

- Develop and finalize contract and SOW
- Coordination with City staff and mining company
- Coordinate plans/specs - first phase of mining
- Work planning, coordination with project staff, work on special issues
- Facilitate advisory group meeting (1 meeting)

**2.2 Phase 2 – September 2003 through December 2003****MINING**

- Prepare/coordinate overall mining and reclamation plan for remaining mine phases, including overall reclamation guidelines
- Help integrate mining considerations with near-final park and lake design, prepare scheduling of phased reclamation/mining plans
- Participate with design team in development of schematic land form/land use concepts

**AQUATIC ECOLOGY**

- Review and interpret hydrogeologic data and other data

- in context of lake design
- Predict biologic community and guide prediction of future in-lake water quality
- Produce final lake design and help integrate with park plan to max. rec potential
- Assist in developing mining and reclamation plan

#### **GROUNDWATER HYDROLOGY**

- Continue monitoring program to determine quality, gradients, and flux of groundwater in key locations
- Prepare preliminary report summarizing groundwater-related findings on flow direction, rate of groundwater flow, quality and contribution to surface water features
- Assist in developing mining and reclamation plan

#### **HYDROLOGY AND HYDRAULICS**

- Evaluate flood management alternatives
- Analyze value of upstream ponding improvements
- Provide hydrology/hydraulic design information (including sketches) lake level control structures, levees, etc. and determine approximate cost and construction timing relative to mining/grading
- Identify permitting requirements for proposed improvements
- Provide stormwater management guidelines for tributary areas outside the City
- Assist in development of mining/reclamation plan

#### **WATERSHED POLLUTANT LOAD ASSESSMENT**

- Finalize future conditions surface watershed water and pollutant loading estimate for Cascade Lake configurations
- Evaluate watershed management measures to improve water quality in Cascade Lake (including improvements in stream corridor of Cascade Creek upstream of Lake)
- Provide stormwater management guidelines for tributary areas

#### **WATER QUALITY ASSESSMENT**

- Complete collection/analysis of supplemental data
- Finalize surface watershed loading and lake response modeling for existing and future conditions
- Prepare preliminary narrative regarding findings for existing and future watershed loadings, implications for future lake water quality
- Assist in development of overall mining/reclamation plan

#### **WETLAND MITIGATION**

- Prepare mitigation concept plan, then near-final wetland mitigation plan, incorporate into

35

overall mining/reclamation and park plan  
(include description of likely ecosystem components)

#### **UPLAND INVENTORY/MANAGEMENT**

- Develop re-vegetation component for reclamation and park site plan that incorporates restoration of native plant communities  
(including id of likely ecosystem components)

#### **IN-LAKE MANAGEMENT**

- Assist in interpretation of groundwater data, review bathymetric map, review H and H and water quality modeling results
- Provide input on lake and park design  
(including education components)
- Develop list of plants and fish best-suited for Cascade Lake system, provide written management guidance
- Develop written lake management guidelines for City to manage in-lake resources, control exotics
- Provide guidance on mine operation/reclamation plan

#### **REGULATORY COMPLIANCE**

- Complete EAW
- Present EAW at public meeting

#### **PARK PLANNING AND LA**

- Prepare site/amenity plan
- Prepare design alternatives
- Prepare preliminary cost estimates

#### **PUBLIC RELATIONS**

- Attend advisory group meeting

#### **PROJECT MANAGEMENT**

- Coordination with City staff
- Work planning, coordination with project staff, work on special issues
- Facilitate advisory group meetings (2 meetings)

### **2.3 Phase 3 – January 2004 through April 2004**

#### **MINING**

- Complete mining and reclamation plan with input from others, assist City in developing agreements related to mineral extraction, staging and reclamation
- Prepare annual schedule of activities  
that will carry through to final close-out of mining/reclamation

34

## **AQUATIC ECOLOGY**

- Prepare O and M component for lake management issues
- Provide aquatic ecology, lake bathymetry component of final deliverable
- Review and help finalize mining and reclamation plan

## **GROUNDWATER HYDROLOGY**

- Prepare groundwater component of final deliverable (groundwater implications for lake management)

## **HYDROLOGY AND HYDRAULICS**

- Finalize analysis of flood management alternatives, prepare support materials/information for final master plan, including cost estimates
- Prepare operation and maintenance guidance for flow control structures and management of flood control components of the system
- Complete LOMR and help City secure approval

## **WATERSHED POLLUTANT LOADING ANALYSIS**

- Identify and document water-monitoring opportunities to manage system
- Summarize findings for final deliverable

## **WATER QUALITY ASSESSMENT**

- Finalize surface watershed loading and lake response modeling for existing and future conditions
- Prepare summary of findings for final deliverable
- Review and help finalize mining and reclamation plan

## **WETLAND MITIGATION**

- Complete final mitigation plan
- Submit permit applications and respond to agency review comments

## **UPLAND INVENTORY/MANAGEMENT**

- Write maintenance plan section on precluding/control of unwanted plant species, make recommendations on maintenance of terrestrial/riparian habitats

## **IN-LAKE MANAGEMENT**

- Prepare management/maintenance plan, for fish and aquatic plants, including preventative plan for exotic invaders and contingency plans for control if they do invade



37 /

#### **REGULATORY COMPLIANCE**

- Respond to agency comments and finalize EAW

#### **PARK PLANNING AND LA**

- Prepare and complete park Master Plan
- Review and help finalize mining and reclamation plan

#### **PUBLIC RELATIONS**

- Work with City staff and project staff to establish strategic marketing guidelines  
prepare summary of recommendations for future direction

#### **PROJECT MANAGEMENT**

- Coordination with City staff and others
- Work planning, coordination with project staff, work on special issues
- Review and comment on mining/reclamation plan and park Master Plan, O & M, and other sections
- Facilitate/coordinate/oversee presenting findings to public, City Council, and Advisory panel
- Coordinate preparation of deliverables

#### **2.4 Meetings**

A meeting schedule to support the activities identified in the scope of work has been identified and is attached. The costs for these meeting are part of the total budget presented for the project. The meeting schedule includes:

- Project kick-off, 20%, 50%, 70%, and 90% project completion technical meetings with City staff
- Four meetings with an Advisory group, including a workshop with the Advisory group in July 2003
- Two design team focus groups, to include City staff as well as interested members of the Advisory group
- One presentation to the City Council near the end of the project

#### **3.0 Budget**

Bonestroo's total budget for this project is \$428,670 and will be billed on the basis of time and materials up to this limit. The personal services budget by phase is as follows:

Phase 1	\$156,020
Phase 2	\$127,620
Phase 3	\$ 93,020
TOTAL	\$376,660

In addition to personal services, the budget for reimbursables is \$52,010.

